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09/697,375	10/25/2000	Stein A. Lundby	PA000452	3689

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Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
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EXAMINER

ABELSON, RONALD B

ART UNIT	PAPER NUMBER
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2666

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/697,375

Applicant(s)

LUNDBY ET AL.

Examiner

Ronald Abelson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 9-18 and 20-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-17 is/are allowed.
- 6) ☒ Claim(s) 1-4, 9-11, 18, 20-22, 24 and 26-39 is/are rejected.
- 7) ☒ Claim(s) 12, 23 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Specification

1. The disclosure is objected to because of the following informalities.

Page 1 line 8, application number 08/963,386 is currently U.S. patent 6,574,211.

Page 1 line 13, the application number is 09/697,372.
Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 4 recites the limitation "the first packet data" in line 13. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States

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before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 1, 3, 28, 36, 38, and 39 rejected under 35

U.S.C. 102(e) as being anticipated by Kumar (US 6,757,270).

Regarding claims 1, 28, 36, 38, Kumar teaches a wireless communication system (fig. 3) operative for transmission of packet data and low delay data on a plurality of forward link transmission channels.

Kumar teaches a first set of forward link channels within the plurality of transmission channels, the first set of channels being assigned to packet data transmissions and packet data being transmitted in frames (supplemental channels, high speed data messaging , col. 3 lines 16-19).

Kumar teaches a second set of forward link channels within the plurality of transmission channels, the second set of channels being assigned to low delay data transmissions (voice, fundamental channel, col. 3 lines 16-19).

Kumar teaches a forward link signaling channel within the plurality of transmission channels (DCCH, col. 2 lines 16-22), the signaling channel being assigned to message transmissions (power control bit, col. 5 lines 51-57),

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wherein each message corresponds to packet data (reverse link channel, col. 5 lines 49-57) and identifies a packet data target recipient (mobile, col. 5 lines 51-57).

Regarding the limitation each message corresponds to packet data, the reverse link channel includes the supplemental-channel.

Regarding claim 3, a first message identifies a subset of the first set of channels (mobile's reverse-link channel, col. 5 lines 51-57). Note, the (mobile's reverse-link channel is a subset of the first set of channels.

Regarding claim 39, a packet data parameter for reception of packet data (power control bit, col. 5 lines 49-57).

6. Claims 29-31, 34, and 35, rejected under 35 U.S.C. 102(e) as being anticipated by Felix (US 6,233,231).

Regarding claims 29, 31, and 35, Felix teaches receiving a first message on a signaling channel (downlink shared control channel, col. 4 lines 23-28), the first message identifying a first packet of data (Walsh code, col. 4 lines 23-28: note, the Walsh code identifies the

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first packet of data) and a target recipient for the first packet of data (fig. 1 box 113, remote unit, col. 4 lines 23-28).

Felix teaches receiving the first packet of data on a low delay data channel (fig. 1 channel 105, dedicated data channel, col. 4 lines 23-28) concurrently with receiving the first message on the signaling channel. Regarding the limitation 'concurrently', Felix teaches once assignment occurs, transmission begins (col. 4 lines 23-28).

Regarding claim 35, Felix teaches the first message identifies a coding scheme used for transmission of the first packet data (Walsh code, col. 4 lines 23-28).

Regarding claim 30, decoding the first packet (fig. 1 box 113).

Regarding claim 34, the low delay channel (fig. 1 channel 105, dedicated data channel, col. 4 lines 23-28) is one of a first set of channels (fig. 1: note plurality of channels 103, 104, 108, and 105), and wherein the first message identifies a subset of the first set of channels (fig. 1 channel 105, col. 4 lines 23-28). Note, the remote

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mobile of aware of which channel 105 the base station is transmitting on.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2, 4, 9-11, 18, 20-22, 24, 26, 27, 32, 33, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar in view of Felix (US 6,233,231).

Regarding claims 2, 4, 9, 18, 21, 22, 27, 37, Kumar teaches a wireless communication system (fig. 3) operative for transmission of packet data and low delay data on a plurality of forward link transmission channels.

Kumar teaches a first set of forward link channels within the plurality of transmission channels, the first set of channels being assigned to packet data transmissions and packet data being transmitted in frames (supplemental channels, high speed data messaging, col. 3 lines 16-19).

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Kumar teaches a second set of forward link channels within the plurality of transmission channels, the second set of channels being assigned to low delay data transmissions (voice, fundamental channel, col. 3 lines 16-19).

Kumar teaches a forward link signaling channel within the plurality of transmission channels (DCCH, col. 2 lines 16-22), the signaling channel being assigned to message transmissions (power control bit, col. 5 lines 51-57), wherein each message corresponds to packet data (reverse link channel, col. 5 lines 49-57) and identifies a packet data target recipient (mobile, col. 5 lines 51-57). Regarding the limitation each message corresponds to packet data, the reverse link channel includes the supplemental channel.

Regarding claim 26, Kumar teaches a processor and packet decoder (fig. 3 mobile unit).

Regarding claim 27, Kumar teaches a memory storage device and a processor (fig. 3 mobile unit).

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Regarding claim 21, Kumar teaches a means for sending a message on a signaling channel (DCCH, col. 2 lines 17-20).

Regarding claim 2, Kumar is silent on a first message is transmitted on the signaling channel concurrently with an associated first packet data frame, and wherein the first message identifies a first packet data recipient associated with the first packet data frame.

Felix teaches a first message is transmitted on the signaling channel (downlink shared control channel, col. 4 lines 23-28) concurrently with an associated first packet data frame (data transmission, col. 4 lines 23-28), and wherein the first message identifies a first packet data recipient (fig. 1 box 113, remote unit, col. 4 lines 23-28) associated with the first packet data frame. Regarding the limitation 'concurrently', Felix teaches once assignment occurs, transmission begins (col. 4 lines 23-28).

Regarding claims 4, 9, 27, Kumar is silent on the first message identifies a coding scheme used for transmission of the packet data.

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Regarding claims 4, 9, 27, Felix teaches the first message identifies a coding scheme / Walsh code used for transmission of the packet data (col. 4 lines 23-28). Note, the examiner corresponds the applicant's signaling channel with the downlink shared control channel of Felix.

Regarding claims 18, 21, 22, and 37, Kumar is silent on the message identifies a parameter of the packet.

Regarding claims 18, 21, 22, and 37, Felix teaches the message identifies a parameter of the packet (Walsh code, col. 4 lines 23-28).

Regarding claim 21, Kumar is silent on the means for encoding a message corresponding to a particular packet and identifying a packet parameter of a packet and a means for sending the message on a signaling channel.

Felix teaches the means for encoding and a means for sending the message on a signaling channel (fix 1 box 100, base station 100, col. 4 lines 3-5).

Regarding claim 22, Kumar is silent on the means for decoding a message corresponding to a particular packet and

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identifying a packet parameter of a packet and a means for using the parameter.

Felix teaches the means for decoding (fix 1 box 113, col. 4 lines 23-28).

Regarding claim 20, Kumar is silent on the message is sent on the forward link from the base station to the mobile.

Regarding claim 20, Felix teaches the message is sent on the forward link from the base station to the mobile (downlink shared control channel, col. 4 lines 23-28).

Regarding claim 24, Kumar is silent the parameter comprises coding and modulation used in transmitting the packet.

Regarding claim 24, Felix teaches the parameter comprises coding and modulation used in transmitting the packet (Walsh code, col. 4 lines 23-28).

Therefore it would have been obvious to one of ordinary skill in the art, having both Kumar and Felix before him/her and with the teachings [a] as shown by Kumar, teaches a wireless communication system (fig. 3)

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operative for transmission of packet data and low delay data on a plurality of forward link transmission channels, and [b] as shown by Felix, a first message is transmitted on the signaling channel concurrently with an associated first packet data frame, and wherein the first message identifies a first packet data recipient associated with the first packet data frame, the first message identifies a coding scheme used for transmission of the packet data, the message identifies a parameter of the packet, the message is sent on the forward link from the base station to the mobile, and the parameter comprises coding and modulation used in transmitting the packet to be motivated to modify the system of Kumar by the base station transmitting the mobile's Walsh code assignment on the DCCH channel of Kumar. This modification can be performed in software. This would improve the system by providing a method for informing the mobile of its Walsh code assignment without using any bandwidth from the fundamental or supplemental channel.

Regarding claim 10, Kumar teaches receiving data requests from a plurality of mobiles (fig. 1: see communication between mobiles 112 and base stations 110)

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and determining a transmission schedule according to the data requests (priority to retransmitted requests, col. 12 lines 57-60).

Regarding claim 11, Kumar teaches assigning a priority level to each of the plurality of mobile units and determining a traffic schedule based on priority (priority to retransmitted requests, col. 12 lines 57-60).

Regarding claim 32, Kumar teaches decoding the message (Kumar: col. 5 lines 51-57). Note, the mobile decodes the message to be able to determine whether it should increase or decrease the power transmit level.

Regarding claim 33, Kumar teaches the message identifies a packet data target recipient (mobile, col. 5 lines 51-57). Note, each mobile is able to identify if the message from the base station pertains to the mobile.

Allowable Subject Matter

9. Claims 13-17 allowed.
10. Claims 12, 23, and 25 objected to as being dependent upon a rejected base claim, but would be allowable if

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rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter.

Regarding claim 13, Kumar teaches a wireless apparatus operative to receive packet data via at least one of a first set of channels (fundamental channel, supplemental channel, col. 3 lines 16-19).

Kumar teaches a processor operative to receive messages via a signaling channel (DCCH, col. 5 lines 51-57) and to determine target recipient information from the received messages (power control bit, col. 5 lines 51-57).

Felix teaches receiving coding information from the received messages (col. 4 lines 23-28).

Although Kumar teaches a data rate determination unit (MAC, col. 9 lines 13-19), none of the prior art of record teaches or fairly suggests a data rate determination unit operative to calculate a data rate in accordance with the target recipient information and the coding information, in combination with all the limitations listed in the claim.

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Regarding claim 13, Felix teaches a wireless apparatus (fig. 1 box 100) operative to receive packet data via at least one of a first set of channels (fig. 1 channels 105).

Felix teaches a processor (fig. 1 box 100) operative to receive messages and to determine target recipient information (Ec/Io communicated to base station, col. 8 lines 23-27)

Felix teaches a data rate determination unit (fig. 6 box 605, 609) operative to calculate a data rate in accordance with the target recipient information (fig. 6 box 603, interference, col. 8 lines 28-31, 45-48) and the coding information (length 16 orthogonal code changing 128 length code, col. 8 lines 39-44).

Although Felix teaches coding information (OVSF, col. 8 lines 38-44), nothing in the prior art of the record teaches or fairly suggests the processor receives coding information from the received messages, in combination with all the limitations listed in the claim. Furthermore, the use of the signaling channel to receive the message is not taught nor suggested.

Regarding claim 12, nothing in the prior art of the record teaches or fairly suggests a higher priority is

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given to a mobile unit experiencing less interference than other of the plurality of mobile units, in combination with all the limitations listed in the claim.

Regarding claim 23, nothing in the prior art of the record teaches or fairly suggests the parameter is a sequence number of the packet, in combination with all the limitations listed in the claim.

Regarding claim 25, nothing in the prior art of the record teaches or fairly suggests the parameter is a first identifier, wherein the first identifier is stored in a memory storage device corresponding to the coding and modulation, in combination with all the limitations listed in the claim.

Response to Arguments

11. Applicant's arguments with respect to claims 1, 27, 28, 32, 33, and 36-39 (applicant: pg. 12-15) have been considered but are moot in view of the new ground(s) of rejection.

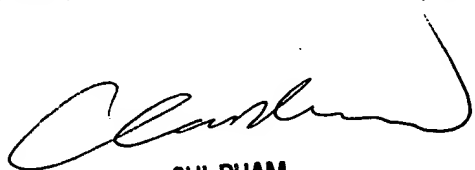
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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Abelson whose telephone number is (571) 272-3165. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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